

Claims

1. A distributed information network constructed for gathering information from sites distributed across a globally accessible computer network, comprising:

5 a root server that stores a list of multiple distributed sites each of which represented by metadata corresponding to directly or indirectly available information content;

multiple distributed sites each of which implemented with an information provider that is remotely located from the root server, the information provider of each of the distributed sites storing metadata corresponding to information content that is retrievable in response to a profiled information search request for search results derivable from the information content to which the metadata correspond; and

10 a profiled information communication link between the root server and each of the multiple distributed sites, the profiled information communication link enabling formation of a path for delivery of the search results to a destination site from a site or sites represented by the metadata of the profiled information search request.

2. The distributed information network of claim 1, in which the multiple distributed sites are configured to host and maintain their own information content while they are available for access by information search requests originating from remotely located globally accessible computer network sources.

20 3. The distributed information network of claim 1, further comprising an operating system client that delivers to the root server an information search request by a user and receives without passing through the profiled information communication link the search results retrieved from the site or sites in response to the profiled information search request.

25 4. The distributed information network of claim 3, in which the operating system client comprises one of a network browser, an applet, or an application.

5. The distributed information network of claim 1, in which at least one of the multiple distributed sites implements a local information network and further comprises:

a local root server that stores a list of multiple distributed local sites each of which represented by local metadata corresponding to directly or indirectly available information content; and

5 multiple distributed local sites each of which implemented with an information provider in which are stored local metadata corresponding to information content that is retrievable in response to a local profiled information search request for search results derivable from the information content to which the local metadata correspond.

10 6. The distributed information network of claim 1, in which at least one of the multiple distributed sites includes multiple levels of servers searched in response to the profiled information search request.

15 7. The distributed information network of claim 1, in which the multiple distributed sites include site servers for at least one of an e-commerce network, a business to business network, a business to business supply site network, a peer to peer network, and a community information network.

20 8. The distributed information network of claim 1, in which the root server includes a query parser interface having a site provider and a core provider, the site provider identifying a certain one or certain ones of the multiple distributed sites corresponding to the metadata representing topic profiles indicative of the information content and the core provider identifying properties of topics represented by the topic profiles.

25 9. The distributed information network of claim 8, in which the site and core providers are operatively associated with respective site profile and topic databases and in which the query parser interface accesses and retrieves information content from the site profile and topic databases to assemble a packet of information including a list identifying a site server or site servers qualified to be searched for information content.

30 10. The distributed information network of claim 1, in which at least one of the multiple distributed sites implements a peer to peer local information network and further comprises:

multiple distributed peer local sites each of which implemented with an information provider in which peer local metadata are stored and retrievable in response to a peer local profiled information search request for search results derivable from the information content to which the peer local metadata correspond; and

5 a peer local root server that stores a list of the multiple distributed peer local sites, each of which represented by metadata corresponding to directly or indirectly available information content, and issues an access token in response to receipt of a search request by a qualified one of the multiple distributed local sites to provide an approved path for delivery of peer local search results that are responsive to the search request.

10 11. The distributed information network of claim 10, in which the access token is issued in accordance with a process of encryption and decryption with a public/private key pair.

15 12. The distributed information network of claim 1, in which at least one of the multiple distributed sites implements a local information network and further comprises:

a local root server that is identified by a root server public/private key pair having a public key portion and that stores a list of multiple distributed local sites each of which represented by local metadata corresponding to directly or indirectly available information content and public key portions of site public/private key pairs generated by the multiple distributed local sites; and

20 multiple distributed local sites each of which implemented with an information provider in which are stored local metadata corresponding to information content that is retrievable in response to a local profiled information search request for search results derivable from the information content to which the local metadata correspond, and the multiple distributed local sites storing the root server public key portion for use in carrying out a cryptographic algorithm to prevent unauthorized changes to information content represented by the stored local metadata.

13. The distributed information network of claim 12, in which the multiple distributed local sites form part of a peer to peer network.

14. A method of gathering information from multiple sites distributed across a globally accessible computer network, comprising:

5 implementing with each of the multiple distributed sites an information provider storing metadata that are retrievable in response to a profiled information search request for search results derivable from information content to which the metadata correspond;

10 establishing a profiled information communication link between a root server that stores a list of multiple distributed sites each of which represented by metadata corresponding to directly or indirectly available information content and each of the multiple distributed sites storing metadata corresponding to information content that is retrievable in response to a profiled information search request;

15 transmitting from an operating system client to the root server a profiled information search request for search results derivable from the information content to which the metadata correspond; and

 forming a communication path for delivery of the search results to a destination site from a site or sites represented by the metadata of the profiled information search request.

20 15. The method of claim 10, further comprising providing a communication link to the operating system client to deliver to it the search results retrieved from the destination site or sites in response to the profiled information search request.

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